

Base Realignment and Closure  
Program Management Office West  
1230 Columbia Street, Suite 1100  
San Diego, California 92101

CONTRACT NO. N68711-98-D-5713  
CTO No. 0084

**FINAL ADDENDUM 1  
TO THE  
DRAFT FINAL SAMPLING AND ANALYSIS PLAN**  
(Field Sampling Plan and Quality Assurance Project Plan)  
Revision 0  
October 3, 2005

**PCB HOT SPOT SOIL EXCAVATION SITE  
PARCELS E AND E-2, HUNTERS POINT SHIPYARD  
SAN FRANCISCO, CALIFORNIA**

DCN: FWSD-RAC-05-1802



**TETRA TECH** EC, INC.

1230 Columbia Street, Suite 500  
San Diego, CA 92101

*Mary Schneider*

Mary Schneider  
Quality Control Program Manager

9/28/05

Date

*Narciso A. Ancog*

Narciso A. Ancog  
NAVFAC SW Quality Assurance Officer

9/28/2005  
Date



TETRA TECH EC, INC.

TRANSMITTAL/DELIVERABLE RECEIPT

Contract No. N68711-98-D-5713 (RAC III)

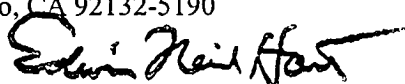
Document Control No. 05-1802

File Code: 5.0

TO: Contracting Officer  
Naval Facilities Engineering Command  
Southwest Division  
Ms. Beatrice Appling, AQE.BA  
1220 Pacific Highway  
San Diego, CA 92132-5190

DATE: 09/29/05  
CTO: 0084  
LOCATION: Hunters Point Shipyard

FROM:

  
Neil Hart, Program Manager

DESCRIPTION: Final Addendum 1 to the Draft Final Sampling and Analysis Plan  
(Field Sampling Plan and Quality Assurance Project Plan) Revision 0, October 3, 2005  
PCB Hot Spot Soil Excavation Site Parcels E and E-2, Hunters Point Shipyard

TYPE: ☐ Contract/Deliverable ☒ CTO Deliverable ☐ Notification  
☐ Other

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(PM to Identify)

SCHEDULED DELIVERY DATE: 10/03/05 ACTUAL DELIVERY DATE: 09/29/05

NUMBER OF COPIES SUBMITTED: 0/9C/7E Copy of SAP to N. Ancog ☒

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TETRA TECH EC, INC.

September 29, 2005  
FWSD-RAC-05-1802  
5.0

Base Realignment and Closure  
Program Management Office West  
Attn: Pat Brooks  
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Mission Valley, CA 92108

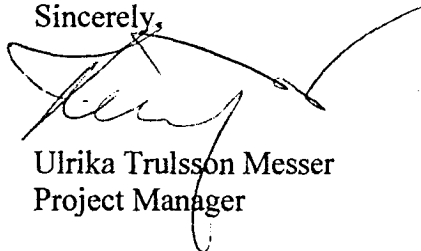
**SUBJECT: FINAL ADDENDUM 1 TO THE DRAFT FINAL SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN AND QUALITY ASSURANCE PLAN), PCB HOT SPOT SOIL EXCAVATION SITE PARCELS E AND E-2, HUNTERS POINT SHIPYARD, SAN FRANCISCO, CALIFORNIA**

Reference: Contract N68711-98-D-5713, Environmental Remedial Action Contract For Sites Southern California, Arizona, New Mexico, and Southern Nevada

Dear Pat Brooks,

Enclosed is Final Addendum 1 to the Draft Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan), PCB Hot Spot Soil Excavation Site Parcels E and E-2, Hunters Point Shipyard, San Francisco, California dated October 3, 2005. If you have any questions or require additional information, please contact Lisa Bienkowski at (949) 756-7592 or me at (619) 471-3528.

Sincerely,



Ulrika Trulsson Messer  
Project Manager

Enclosures: Final Addendum 1 to the Draft Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan), PCB Hot Spot Soil Excavation Site Parcels E and E-2

DRAFT FINAL SAMPLING AND ANALYSIS PLAN  
(FIELD SAMPLING PLAN AND QUALITY ASSURANCE  
PROJECT PLAN) PCB HOT SPOT SOIL EXCAVATION SITE  
PARCELS E AND E-2

DATED 21 SEPTEMBER 2005 WAS CONVERTED TO:

FINAL SAMPLING AND ANALYSIS PLAN  
(FIELD SAMPLING PLAN AND QUALITY ASSURANCE  
PROJECT PLAN) PCB HOT SPOT SOIL EXCAVATION SITE  
PARCELS E AND E-2

AND IS APPENDIX A OF THE FINAL PROJECT WORK PLAN  
PCB HOT SPOT SOIL EXCAVATION SITE PARCELS E AND E-2

DATED 10 NOVEMBER 2005

THIS RECORD IS ENTERED IN THE DATABASE AND FILED  
AS

RECORD NO. AR\_N00217\_004137

## 1.0 INTRODUCTION

This Addendum to the Sampling and Analysis Plan (SAP) (*Draft Final Sampling and Analysis Plan*, Revision 0, Hunters Point Shipyard, San Francisco, California, DCN: FWSD-RAC-05-0992 [Tetra Tech FW, Inc, 2005]) was prepared to include additional sampling and analyses from containers uncovered during excavation and potentially polychlorinated biphenyl (PCB)-contaminated industrial process equipment (IPE)/piping and paint containers. This Addendum to the SAP was prepared on behalf of the Naval Facilities Engineering Command, Southwest (NAVFAC SW) by Tetra Tech EC, Inc. (TtEC), under Remedial Action Contract (RAC) No. N68711-98-D-5713, Contract Task Order (CTO) No. 0084. This Addendum complies with the requirements of revising the SAP when a scope or regulation change occurs during the course of the work in accordance with *Environmental Work Instruction (EWI) #2, 3EN2.2, Review, Approval, Revision, and Amendment of Sampling and Analysis Plans (SAPs)* (Southwest Division, Naval Facilities Engineering Command, 2001). This Addendum to the SAP includes only changes to the sections of the SAP that require modification relevant to additional sampling activities. This Addendum will be used in conjunction with the *Draft Final Sampling and Analysis Plan*, DCN: FWSD-RAC-05-0992.

Drums, bottles, jars and small containers with unknown content have been unearthed during the time-critical removal action for the PCB Hot Spot excavation. The unknown contents will be sampled and analyzed to determine safety measures and procedures needed to be implemented to facilitate their inspection, handling, removal, and disposal option.

In addition, the Navy has tasked TtEC with sampling the IPE/piping to determine if the equipment contains PCBs, disposing of the paint containers, and disposing of liquid in the sump at Building 115 located in Parcel B. Samples will be collected from IPEs, paint container contents and sump liquids for chemical analysis.

Sampling to be conducted under this addendum is to be used to characterize for disposal. Therefore, a seven-step data quality objective table has not been prepared.

## 2.0 BACKGROUND

### *Additional text.*

Building 115 is located in Parcel B in the northwest quadrant of HPS at cross-streets McCann and Lockwood. Figure A.3-1 of the original SAP illustrates the location of Building 115, which was used by the Navy as a submarine training facility.

The area of concern for this Addendum is Room 102 located in the southeast corner of the building, which contains three pieces of potentially PCB-contaminated IPE/piping and paint containers (presumed left by tenants) located in a submerged area approximately 4 feet deep located in the center of the room. (Access is through a hatch-type door in the floor.) In addition, a sump located outside the building in the southeast corner contains what appears to be rainwater.

## 4.0 SAMPLING STRATEGY

### 4.4 CONTAINER CONTENT SAMPLING

*Additional text.*

Drums, bottles, jars and small containers with unknown contents have been unearthed during the excavation activities at the PCB Hot Spot. All containers will be screened by field instruments for radioactivity and then sampled and analyzed for the presence of radioactive materials. One sample will be collected per container and sent to an off-site laboratory for gamma spectroscopy and gross alpha/beta analysis. Additional analysis such as strontium-90 ( $^{90}\text{Sr}$ ) or alpha spectroscopy may be requested based upon review of the sample results. Once the containers are sampled for radioactivity, the containers will undergo "HazCating" or "waste compatibility screening," which is defined as a series of rapid, qualitative chemical and physical tests conducted to determine potential hazards, handling precautions, storage criteria, and disposal classification of the material in question. Sampling procedures are described in Section 6.4.

### 4.6 BUILDING 115 SAMPLING

Building 115 contains three types of waste streams that will be sampled and analyzed for waste characterization purposes.

The first waste stream is composed of three pieces of IPE/piping, which may contain hydraulic oil. One sample of the oil from each piece of equipment will be obtained and analyzed for PCBs, ignitability, and total extractable petroleum hydrocarbons (TPH-extractable). If oil is not present or a sample not obtainable, then one wipe sample will be collected from each piece of equipment from the interior of the equipment where the oil would have been stored. If the interior of the equipment is not accessible without cutting into the system, then an exterior wipe sample will be collected from an area where leakage may have occurred. Wipe samples will be analyzed for PCBs.

The second waste stream is composed of stained dust/soil/sludge that is contained beneath the pieces of IPE. One sample will be collected from this material and analyzed for PCBs, metals, and semivolatile organic compounds (SVOCs).

The third waste stream is a sump on the exterior of the building, which is believed to contain rainwater. One liquid sample will be collected from the sump and analyzed at a minimum for VOCs, SVOCs, pesticides, PCBs, metals, TPH-extractable, and ignitability. Additional analyses may be added if the water is to be discharged to the sanitary sewer.

## 5.0 REQUEST FOR ANALYSIS

### 5.1 ANALYTICAL METHODS

*Additional text.*

#### Off-site Laboratory (Soil/Sludge Samples)

- Gross Alpha and Beta by U.S. Environmental Protection Agency (EPA) Method 9310
- Ignitability by EPA Method 1010

#### Off-site Laboratory (Unknown Content Samples)

- Gross Alpha and Beta by EPA Method 9310
- Gamma Spectroscopy by EPA Method 901.1 M (modified for solids) or equivalent
- <sup>90</sup>Sr by Department of Energy (DOE) Sr-01/Sr-02 Method or equivalent (if needed)
- Alpha spectroscopy by DOE HASL-300 Method or equivalent (if needed)

#### Off-site Laboratory (Wastewater Samples)

- Gross Alpha and Beta by EPA Method 9310
- Ignitability by EPA Method 1010

#### On-site testing using the following HazCat screening tests:

- Water Reactivity (air or water reactive)
- Miscibility (aqueous vs. organic solubility)
- Flammability and Explosivity
- pH
- Presence of Sulfide and Cyanide
- Presence of Significant Halogen Content
- Presence of Oxidizers and Peroxides
- Field Compatibility for Uncharacterized Wastes

### 5.2 SAMPLE CONTAINERS, PRESERVATIVES, AND HOLDING TIMES

Addendum Table A.5-1 lists the sample containers, preservatives, and holding time requirements for gross alpha and beta and ignitability tests that were not included in Table A.5-1 of the original SAP.



## 6.0 FIELD METHODS AND SAMPLING PROCEDURES

### 6.4 CONTAINER CONTENT SAMPLING PROCEDURES

Prior to sampling the contents of the material from each container, a qualitative visual description of the contents of each container will be recorded in the logbook to include the following:

- Any and all exterior markings
- Any unique or unusual container conditions (e.g., reinforced, lined, exotic construction materials, etc.)
- The type of opening(s)
- The approximate amount of material contained in the container
- Physical state, color, clarity, viscosity, number and relative estimated volume of each identified discrete layer or phase
- Readings from real-time health and safety monitors

Samples of material from the containers will be collected in accordance with TtEC Standard Operating Procedure (SOP) HPO-Tt-009, included in the original SAP, for sampling of radiological materials.

For liquids, samples will be extracted through the bung hole if there is one on the container. If the container contains mostly solid material rather than liquids, the entire top of the container will be removed to sample the contents.

Using an appropriate sampling device or a combination of devices, several representative grab samples with a combined volume of up to approximately 250 milliliters (mls) will be withdrawn from each container and carefully placed into a sampling container. If a container contains more than one phase (e.g., solids and liquids or multi-phase liquids), separate samples are to be taken from each phase. If the volume of any individual phase is so small as to preclude recovery of a sufficient sample (any volume less than 5 mls), a remark to this effect will be recorded in the logbook.

Samples will be numbered, labeled, documented, and packaged according to procedures in Sections 6.8 through 6.11 of the original SAP.

At the same time the sample is collected for the off-site laboratory analysis, an aliquot will be collected in a labeled test tube and transferred to the HazCat area (Building 271) where the HazCat Technician(s) will carry out waste compatibility screening. The parameters described in Section 5.1 will be tested according to the manufacturer's instructions for the HazCat kit. The

results of the HazCat tests will be recorded on a field form and subsequently evaluated to categorize similar types of wastes together for disposal purposes.

## **6.12 Building 115 Sampling**

Wipe and solid material sampling procedures are described in Section 6.4.2 of the original SAP. The solid material sampling procedures will also be used to collect an oil sample. The collection of a wastewater sample is described in Section 6.4.4 of the original SAP.

## 14.0 REFERENCES

Tetra Tech FW, Inc. 2005. *Draft Final Sampling and Analysis Plan*. Revision 0. Hunters Point Shipyard, San Francisco, California. DCN: FWSD-RAC-05-0992.

## TABLES

## ADDENDUM TABLE A.5-1

## SAMPLE CONTAINERS, PRESERVATIVES, AND HOLDING TIMES

Analyte	Analytical Method	Container	Preservative	Holding Time *
<b>SOIL/SLUDE/CONTENT SAMPLES</b>				
Gross alpha and beta	EPA Method 9310	250-mL plastic container	None	6 months
Ignitability	EPA Method 1010	250-mL plastic container	None	28 days
<b>LIQUID SAMPLES</b>				
Gross alpha and beta	EPA Method 9310	250-mL plastic container	None	6 months
Ignitability	EPA Method 1010	250-mL plastic container	None	28 days

**Notes:**

- \* Holding time is defined as the time by which the analyses should be completed. Holding times have not been established for radiological sample analysis; however, 6 months is usually used as a recommended holding time.

EPA - U.S. Environmental Protection Agency  
 mL - milliliter  
 N/A - not applicable